

Remarks/Arguments

Pending Claims:

Applicant has canceled claim 7 and added new claims 16, 17, and 18 herewith. Thus, claims 1 through 6 and 8 through 18 are currently pending in the application.

No new matter has been added.

Rejections Under 35 U.S.C. 112

The Examiner has rejected claim 10 under §112 as having insufficient antecedent basis to support the limitation "the concentration of surfactant" in the claim. Applicant has amended the claim herewith to provide an antecedent basis.

The Examiner has also rejected claim 15 under §112 for having insufficient antecedent basis to support the limitation "the sample," as we as for being indefinite due to the inclusion of the statement "frequently a biologically active compound" in the preamble of the claim. Applicant has amended the claim herewith to overcome the rejection for insufficient antecedent basis, and has also removed the wording "frequently a biologically active compound" from the preamble of the claim. Applicant does not consider the wording removed from the preamble to have been a substantive limitation of the claim. Applicant has also proactively removed similar language from the preamble of claim 14.

Rejections Under 35 U.S.C. 102

The Examiner has rejected claims 1 through 4 and 6 though 12 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,340,744, issued to Leif et al.

Applicant has amended claim 1 herewith to provide that the fluorephore and lumiphore (the energy transfer donor) are not a ligand of yttrium or a 3-valent lanthanide element having atomic number 59-71. The '744 patent requires that the energy transfer donor be one of a compound of yttrium or a 3-valent lanthanide element having atomic number 59-71. Claim 1, as currently amended, is not anticipated by U.S. Patent No. 6,340,744.

Claims 2 through 4 and 6 depend, either directly or indirectly, from claim 1. Thus, in view of the current amendment to claim 1, Applicant submits that claims 2 through 4 and 6 are also allowable over the cited reference, U.S. Patent No. 6,340,744.

Claim 7 has been canceled herewith.

The Examiner states that claims 8 through 13 are product-by-process claims. Applicant respectfully disagrees. These claims are directed to a composition (in this case, a solution) having certain properties. This is evidence in the preamble of the claim (i.e. everything preceding the transition phrase "consisting essentially of"). Claim 8 is directed to a unitary luminescence enhancing solution. The solution consists essentially of a solvent and a luminescence-enhancing amount of at least one energy transfer donor selected from the group consisting of a fluorophore and a lumiphore. The solution further results, upon drying, in a solid that enhances the luminescence of an energy transfer acceptor lanthanide ion complex by a mechanism other than completing the complexation of the lanthanide ion. This last portion of the claim refers to a property of the claimed solution. The claim is not directed to a product-by-process, but rather to a solution having certain components and properties.

Thus, Applicant submits that claims 8 through 13 are not product-by-process claims and are patentable over the cited art.

Rejections Under 35 U.S.C. §103

The Examiner has rejected claims 1 through 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,340,744, issued to Leif et al., in view of U.S. Patent No. 4,927,923, issued to Mathis et al., and further in view of U.S. Patent No. 5,696,240, issued to Vallarino et al.

In the Examiner's §103 rejections, the Examiner addresses only claims 14 and 15 individually. Applicant takes the Examiners arguments not directed to those claims to apply generally to claims 1 through 13. As discussed further, below, the Examiner's §103 arguments do not

appear to provide a *prima facie* case of obviousness with respect to claim 8 and those claims dependent therefrom because the Examiner makes no arguments with respect to those claims.

With respect to claims 1 through 6 (claim 7 has been canceled herewith), Applicant notes that claim 1 has been amended herewith, and the remainder of claims 2 through 6 depend, either directly or indirectly, from claim 1.

Claim 1 has been amended herewith to provide that the fluorophore and lumiphore are not a ligand of yttrium or a 3-valent lanthanide element having atomic number 59-71. Applicant submits that newly-amended claim 1 is patentable over U.S. Patent No. 6,340,744, issued to Leif et al. Because this patent reference forms the core of the §103 rejections, Applicant submits that the Examiner's other rejections, to claims depending from claims 1 (namely, claims 2 through 6), are also overcome. Thus, Applicant submits that claims 1 through 6 are now in allowable condition with respect to the prior art.

The Examiner has characterized claims 8 through 13 as product-by-process claims. Applicant believes this is inaccurate for the reasons stated with respect to the §102 rejections, above, and incorporates those arguments here by reference. Because claims 8 through 13 are directed to a solution having certain components and characteristics, the Examiner has not presented a *prima facie* case of obviousness under the cited references (indeed, the Examiner does not present arguments specific to these claims under §103). Thus, Applicant submits that these claims are in condition for allowance over the cited references.

With respect to the cryptate disclosure of Mathis et al., Applicant notes that claim 5 of the present Application, being dependent on claim 1, is allowable for the reasons stated above. New claim 18 is essentially the equivalent of claim 5 as-filed (it incorporates the limitations of original claim 1 and original claim 5). Thus, new claim 18 includes the cryptate limitation, but does not include the newly-added limitations of amended claim 1. Applicant therefore addresses the Mathis et al. reference as it pertains to new claim 18, while noting that it is not pertinent to claim 5 because the primary reference cited against dependent claim 5 has been overcome.

The Mathis et al. reference discloses a macropolycyclic rare earth complex suitable as a fluorescent tracer. Mathis et al. do not disclose, or suggest, use of a cryptate with the compounds of the present invention as part of an energy transfer acceptor lanthanide ion complex. The compounds disclosed by Mathis et al., and the chemistry of those compounds, is not the same as that of the present macrocyclic compounds. There is nothing in Mathis et al. that would lead one of ordinary skill in the art to substitute the cryptate of Mathis et al. for the macrocyclic chelator of the present invention. Thus, Applicant believes that new claim 18 is allowable over the Mathis et al. reference.

With regard to claims 14 and 15, Applicant notes that these claims require a unitary luminescence enhancing solution. See, for example, step c) of claim 14 and step e) of claim 15. Cited U.S. Patent No. 6,340,744 requires micellar solutions. The advantages of the present unitary luminescence enhancing solution over the previous micellar solutions are discussed throughout the specification of the present Application. Not only does U.S. Patent No. 6,340,744 fail to disclose or render obvious this aspect of claims 14 and 15, neither the Mathis et al. or Vallarino et al. references make up the deficiency. Thus, Applicant submits that claims 14 and 15 are allowable over the cited references.

Double Patenting

The Examiner has rejected claims 1, 3, 4, and 14 on the ground of non-statutory obviousness-type double patenting. Claims 1, 3, and 4 have been rejected in view of claims 4, 27, and 34 of U.S. Patent No. 5,373,093, and also claim 4 of U.S. Patent No. 5,696,240. Claim 14 has been rejected in view of claim 1 of U.S. Patent No. 6,750,005.

Claim 1 has been amended herewith, and claims 3 and 4 depend from claim 1. Applicant believes that the present amendment to claim 1 renders that claim patentably distinct from the cited claims of U.S. Patent Nos. 5,373,093 and 5,696,240. Because claims 3 and 4 depend from claim 1 and include all of the elements of claim 1, Applicant believes that these claims are also patentably distinct from the cited claims.

With respect to claim 14, Applicant disagrees with the Examiner's assessment relating to claim 1 of U.S. Patent No. 6,750,005. As noted above with respect to the Examiner's § 103 rejections, claim 14 requires a unitary luminescence enhancing solution. Claim 1 of U.S. Patent No. 6,750,005 has no such limitation. Thus, the claims are patentably distinct.

In view of the foregoing, Applicant respectfully requests that the Examiner withdraw the double patenting rejections.

CONCLUSION

Applicant has paid, herewith, the fees for an Extension of Time (third month). Applicant respectfully requests that the Extension of Time be granted.

Applicant respectfully submits that all claims pending in the current Application, namely, claims 1 through 6 and 8 through 18, are now in condition for allowance. Applicant requests that a timely Notice of Allowance be issued in this case.

If there are any matters which can be clarified by telephone, the Examiner is requested to contact the undersigned attorney.

If there are any fees due in connection with the filing of this response, the Office is authorized to charge same to Deposit Account No. 50-0354.

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Respectfully Submitted,
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